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# PLAN OF WORK

**CHOWAN-  
PASQUOTANK  
RIVER BASINS**

**NORTH CAROLINA  
AND  
VIRGINIA**

FOR  
WATER  
AND RELATED  
LAND RESOURCES  
STUDY

March 1977

U.S. Department of Agriculture  
Economic Research Service  
Forest Service  
Soil Conservation Service  
and Other Cooperating Agencies

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PLAN OF WORK  
FOR  
WATER AND RELATED LAND RESOURCES STUDY  
CHOWAN-PASQUOTANK RIVER BASINS  
NORTH CAROLINA AND VIRGINIA

March 1977

UNITED STATES DEPARTMENT OF AGRICULTURE  
Economic Research Service  
Forest Service  
Soil Conservation Service

In cooperation with

North Carolina Department of Natural and Economic Resources  
U. S. Army Corps of Engineers, Norfolk and Wilmington Districts  
Virginia State Water Control Board, Bureau of Water Control Management  
North Carolina Soil and Water Conservation Commission  
Virginia Soil and Water Conservation Commission  
North Carolina-Virginia Water Resources Management Committee

Cover Photo: Pasquotank River at

Elizabeth City, North Carolina

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PLAN OF WORK  
FOR  
WATER AND RELATED LAND RESOURCES STUDY  
CHOWAN-PASQUOTANK RIVER BASINS

Introduction

How and Why Study was Requested

In a letter dated October 6, 1970, the U. S. Army Corps of Engineers, Norfolk District, requested the U. S. Department of Agriculture (USDA) to make a study of the Chowan River Basin under authority of Section 204, Flood Control Act of June 30, 1948. The USDA was requested to provide an appraisal of the agricultural, rural and upstream watershed needs of the basin and to participate in the formulation of a framework plan for development of the basin's water resources. Potential problems and needs associated with the water and related land resources were to be estimated for an approximated 50-year period. Detailed studies were to be made to determine the structural, nonstructural, and associated land treatment measures which would be needed within the next 10 to 15 years.

A letter dated September 7, 1972, from the Administrator, USDA, Soil Conservation Service (SCS) directed the Virginia SCS State Conservationist to proceed with studies and to advise the appropriate state and local agencies that the USDA was prepared to cooperate in these studies and investigations. The Administrator appointed the SCS State Conservationist in Virginia as Chairman of the USDA Field Advisory Committee (FAC). The Economic Research Service (ERS) designated its Northeastern Resource Planning Group Leader of Broomall, Pennsylvania, to serve on the FAC. The Forest Service (FS) designated its Doraville, Georgia, Field Representative to serve on the FAC. The Administrator also directed the State Conservationist as Chairman of the FAC to prepare a plan of work mutually satisfactory to the USDA agencies and to the states involved.

Meetings were held with representatives of the Virginia State Water Control Board, Bureau of Water Control Management (SWCB) and the North Carolina Department of Natural and Economic Resource (DNER) to explain the Department of Agriculture's river basins technical assistance program. These meetings prompted requests late in 1975 or early 1976 to the USDA to proceed with studies on the Chowan and to add the Pasquotank River Basins and the Dismal Swamp to the study area.

The soil and water conservation commission from each state provided letters of endorsement. The North Carolina-Virginia Water Resources Management Committee took action on July 28, 1976, to write a letter to the USDA to endorse study efforts. In support of each state's efforts to develop a state water management plan, the USDA has been requested to provide all available data, to make additional studies related to identified study concerns and to identify alternative solutions.

### Authority for the Study

The Agricultural Appropriation Act for fiscal year 1973 provided funds for the USDA to begin cooperating with the States of North Carolina and Virginia in studies and investigations of the Chowan River Basin under the provisions of Section 6, Public Law 83-566.

### Expected Results

The USDA will prepare a report of its findings for agency use at the end of Phase 2 of the study. 1/ The report will consist primarily of data collected during Phase 2 for immediate use. Various working documents analyzing specific aspects of the study will be provided study participants. Meetings will be held with sponsors at the conclusion of Phase 2 to determine the need and/or set the stage for continuing into Phases 3 and 4. Data collected in Phase 2 will be used in developing Phases 3 and 4. Items which need further study and alternative solution preferences will be identified through the public involvement program and sponsors. A final report will be issued to include this additional work.

### How Results Will Be Used

Basic data and results of studies will be used by the DNER and the SWCB in developing their respective state water management plans. Results of this study will be used in the ongoing nonpoint source pollution study, Section 208 of Public Law 92-500. The data will also contribute to the Southeast Basins Inter-Agency Committee's (SEBIAC) proposed Level "B" study for the same area. Decision makers at all levels of government in the study area should find the report useful as a source of raw data and problem identification.

### Description of the Study Area

The study area includes all the area draining into Albemarle, Croatan and Roanoke Sounds, excluding the drainage of the Roanoke River. See Figure 1.

The Chowan-Pasquotank Basins are located in the extreme southeastern portion of Virginia and in the northeast corner of North Carolina. These basins drain about 9,073 square miles of area or about ten percent of Virginia and seven percent of North Carolina.

The Chowan-Pasquotank Basins are entirely within the Piedmont and Coastal Plains Physiographic Provinces. Only the most western tributaries exhibit moderately sloping profiles. Streams in the eastern portion of the watershed are flat and traverse much swamp and marshland area.

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1/ Planning phases are described on Page 6.

The Chowan River Basin is drained by three major tributaries; the Meherrin, the Nottoway and the Blackwater Rivers. The Nottoway and Blackwater Rivers join at the Virginia-North Carolina State line to form the Chowan River. The Meherrin enters 12 miles downstream. The Chowan River flows in a southeasterly direction until it empties into the west end of Albemarle Sound. The Albemarle Sound area and the North Carolina Outer Banks are called the Pasquotank River Basins area.

The Pasquotank River Basins lies entirely in the Coastal Plain and encompasses a total area of 3,799 square miles within the State of North Carolina, of which approximately 1,100 square miles or 29 percent is covered by water. The area includes Albemarle Sound, Currituck Sound, North River, Pasquotank River, Flatty Creek, Little River, Perquimans River, Yeopim River, Kendrick Creek (Mackeys Creek), Scuppernong River, Alligator River, Croatan Sound, Roanoke Sound and that portion of Pamlico Sound that lies north and east of a line extending from the northeast tip of Ocracoke Island to Sandy Point near Stumpy Point Bay. The three major land resources areas that are included in the study area are the Piedmont, Coastal Plain, and Flat Woods.

#### Relationship to Other Studies and Programs

A Level "B" River Basins Study for the Chowan-Pasquotank River Basins has been proposed with the Southeastern Basins Inter-Agency Committee (SEBIAC) as the sponsor. Basic data and reports prepared by the USDA will be provided to the SEBIAC for use in its Level "B" study.

The Chowan-Pasquotank River Basins Study will provide an increment to the Virginia State Water Management Plan which is currently being prepared. Water supply studies for the Hampton Roads area currently being made by the Norfolk District, U. S. Army Corps of Engineers (COE). The COE has been authorized by Congress to study the Chowan River Basin and its tributaries and adjacent watersheds for water supply. Water quality and resource studies are annually being made by the states. The USDA's coordination will be accomplished through the USDA FAC. 1/ Planning activities will be coordinated with those of other federal and state agencies, planning districts, soil and water conservation commissions, and county planning bodies.

#### Objectives

The overall purpose of the Chowan-Pasquotank River Basins Study is to provide water and related land resources data to the states so that they may prepare a state water management plan and to suggest alternative solutions to problems identified in the study. The USDA needs the information to develop its going programs. The following objectives will be emphasized during Phases 3 and 4:

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1/ The FAC is defined on Page 11.

1. To enhance national economic development (NED) by increasing the value of the Nation's output of goods and services and improving national economic efficiency.
2. To enhance the quality of the environment (EQ) by the management, conservation, preservation, creation, restoration, or improvement of certain natural and cultural resources and ecological systems for the benefit of mankind.

#### Problems, Component Needs and National Objectives

Requesting agency representatives have met with the USDA FAC and have tentatively identified study concerns. The relationship of the problems, component needs and primary objectives are listed in Table 1. County, city and state officials, local organizations, environmental interest groups and other interested individuals will be requested to participate in establishing study concerns of importance in their area. Questionnaires will be mailed out and provided at public meetings in order to identify areas of public concern. Study concerns will then be evaluated by the planning staffs and translated into component needs and elements of work. This Plan of Work will be revised as necessary to reflect identified concerns.

Table 1. Study concerns related to component needs and primary objectives, Chowan-Pasquotank River Basins

<u>Study Concerns</u>	<u>Component Need</u>	<u>Primary Objective</u>
Land Use, Treatment and Management	Improve use, treatment and management of forest, agricultural and urban land, conserve wetlands, prime and unique farmlands.	NED, EQ
Floodwater Damage	Reduce floodwater damage on agricultural, urban and built-up areas.	NED, EQ
Drainage	Improve drainage on the agricultural bottomland with high production potential and in urban areas which have vector problems.	NED
Irrigation	Provide adequate irrigation water for agricultural lands.	NED
Water Supply Use and Management	Provide water for projected M+I needs and rural needs.	NED
Environmental Quality	Preserve natural aesthetic and scenic features; protect and enhance biological resources and ecosystems; and enhance selected quality aspects of land, water and air.	EQ
Cultural	Preserve and protect historical, archaeological and other unique sites.	EQ
Economic Conditions	Increase agricultural, forestry and mineral production and improve economic and social well being in the region.	NED
Recreation	Enhance outdoor recreational opportunities.	NED
Fish and Wildlife	Protect and enhance fish and wildlife resources.	NED, EQ
Erosion and Sediment	Reduce erosion and sediment damage.	NED, EQ
Land Disposal of Solid Waste	Provide suitable sites for solid waste disposal to meet needs.	EQ
Nonpoint Source Pollution	Reduce pollution from nonpoint sources.	EQ
Low Flow Management	Provide adequate flow to maintain optimum uses of streams.	NED, EQ

## General Study Procedures and Work Outline

The Chowan-Pasquotank River Basins have been divided into five subareas or study areas with apparent similar characteristics. See Figure 2.

The study will be conducted in four planning phases as follows:

1. Organization and Setting of Objectives
2. Inventory and Analysis of Socio-Economic and Natural Resource Bases and Identification of Problems and Needs.
3. Development and Evaluation of Alternative Plans
4. Plan Selection

Planning phases will be subdivided into 15 items from the starting point to distribution of the final report. Completion dates are set for each. See Chart 1.

Major activities and work items for Phase 1 are displayed on Table 2 with public involvement items shown on Table 3.

Phase 2 major activities and work items are displayed on Table 4 and public involvement items shown on Table 5.

Study concerns have been identified for the entire basin by state and federal study participants. These concerns and the work items are displayed in Tables 6 through 19. Public involvement will further refine these study concerns and identify priorities for study. Detailed activity schedules will be prepared for each study concern by subarea to facilitate management of Phase 2.

Phases 1 and 2 will be conducted concurrently in each study area as depicted on Chart 1. Phase 2 critical work items have been identified and shown on Chart 1. Due dates for these items have been accounted for in each study concern work outline as they apply.

Meetings will be held with sponsoring agencies and the public at the completion of Phase 2 in each subarea. The purpose of these meetings will be to determine the need for proceeding with Phases 3 and 4 and to establish sub-area study priority. Public involvement will reflect public preference and dictate the direction and magnitude of detailed studies which follow. Detailed work outlines and schedules will be prepared for each subarea before proceeding with Phases 3 and 4. Each detailed subarea work outline will have a time frame mutually agreeable with public preferences and sponsoring agencies. USDA agency overall costs are estimated and shown on page 13 by fiscal year, assuming that studies will proceed to completion.

The study could terminate in any subarea after Phase 2 depending on the significance of problems and needs identified by local concerns. Phases 3 and 4 planning activities may be reduced to selected areas within a subarea.

Existing data and information will be used to the extent possible. Data will be compiled as appropriate for reporting purposes.

### Phase 1. Organization and Setting of Objectives

General Procedures. This phase of the study will be devoted to organizational and management activities. Coordination procedures will be developed with other planning agencies to avoid duplication of study effort. This includes setting specific objectives as related to component needs, developing a strategy for continuing public involvement throughout the life of the study and preparing a plan of work. Major activities, time requirements and agency responsibilities for work items are itemized in Table 2. The public will be involved to identify public concerns and firm-up study concerns listed in Table 1. Major activities and work items for public involvement are listed in Table 3. The intensity of public involvement will be based on availability and need as determined by sponsoring agencies, local officials and policy committees and the FAC. Phase 1 milestone dates will be at the end of blocks numbered 1 through 5 on Chart 1.

### Phase 2. Inventory and Analysis of Socio-Economic and Natural Resource Bases and Identification of Problems and Needs

General Procedures. This phase of the study will include a collection of available data concerning certain water and related land resources and an evaluation of the ability of these resources to meet future needs without planned development. Projections for 1990, 2000 and 2020 will be made by using a linear programming model to estimate future conditions without planned development. Existing publications and data sources will be used. Random samplings and consultation will be the method used if data must be collected. The study will not include area beyond the dune line. Data will be compiled as appropriate and summarized by soil productivity groupings. Data will be displayed by county, hydrologic boundary subareas and state boundary as shown on Figure 2. A summary of major activities and work items are shown in Table 4. Technical data will be compiled with a narrative description for staff use.

The public involvement program will continue through Phase 2 by policy committee meetings and with the public as needed. Major activities and work items for public involvement are listed in Table 5.

The SCS planning staff leader in concert with involved agency or disciplines will prepare detailed activity schedules and establish precedence for each study concern work outline. Study concerns will be related to study areas.

Meetings will be held with the sponsors and cooperating agencies upon completion of the work items in this phase. The purpose will be to determine the need for continuing into Phase 3 and subsequently to Phase 4. The Plan of Work will be revised based on the need to proceed in any or all subareas. Detailed man-day estimates and schedules will be prepared before proceeding to Phase 3.

### Phase 3. Development and Evaluation of Alternative Plans

General Procedures. Based on priorities set by the public involvement program and on the inventory data for the study area, specific decisions can be made regarding resource problems and needs. Opportunities will be identified to meet these needs through water and land resource developments. Alternative plans will be developed to optimize elements of the nation's economic development and environmental quality objectives. Other alternative plans will be developed to incorporate elements of the nation's economic development and environmental quality that will meet desires and needs of the region. The beneficial and adverse effects of each alternative selected will be determined in terms of its contribution to the multi-objective approach. Each will be compared to without development alternatives.

Phase 3 major activities and work items are shown on Table 20. Major activities and work items will be revised as needed to keep Phase 3 activities current. Public involvement will be maintained to aid in selecting elements of the preferred plan. Public involvement details are shown in Table 21.

### Phase 4. Plan Selection and Implementation

General Procedures. The purpose of Phase 4 is to select a preferred plan and provide information necessary for implementation. Displays of the preferred plan will be prepared and presented to the public. The priorities and preferences will be identified through public participation. These preferences will be incorporated into a final preferred plan that will be published in the final USDA report. The report will include estimates of implementation costs, a recommended schedule for implementation and the opportunities for USDA and other programs to contribute to the preferred plan. Needs for further authorizations to achieve implementation of the plan will also be presented in the report. Phase 4 major activities and work items are shown in Table 22. Public involvement will be maintained throughout this phase in all subareas as needed. Priorities will be mutually established by the policy committees and concerned agencies. Overall cost estimates for Phase 4 are shown on page 13.

### Reports

### Plan of Work

A plan of work (Phase 1) will be prepared by a work group composed of representatives from each federal and state agency and presented to the USDA Field Advisory Committee (FAC), the N. C. Department of Natural and Economic Resources (DNER), the Bureau of Water Control Management, Virginia State Water Control Board (SWCB) and the North Carolina-Virginia Resources Management Committee for approval and/or endorsement. The soil and water conservation committees will be asked to provide letters of endorsement.

## Planning Progress Reports

Each agency will submit planning progress reports at the FAC meetings. Progress will be reported by work items in the Plan of Work. The progress reports will be made part of the FAC minutes for that meeting. Copies of the FAC minutes will be distributed to cooperating state agencies, Northeast Technical Service Center (TSC) 1/ and the Washington Advisory Committee (WAC). 2/ A summary of progress reports will be provided to all interested in the planning subareas.

### Interim Report

An interim report compiled for staff use will consist only of the raw data obtained in Phase 2. The report is scheduled for completion by October 31, 1977. It will be used to coordinate information between cooperating agencies. The report will contain inventories of resources, problems, needs and opportunities as related to component needs within the basins and will pull together all information from the basic planning disciplines that have been developed.

### Final Report

A final report will be prepared if public involvement indicates a need to proceed through Phases 3 and 4. Preparation of the final report shall begin as soon as sufficient data is gathered to write any one section. The final report will be completed by September 1980. The outline of the final report is as follows:

#### Report Outline

Chapter 1	Summary
Chapter 2	Introduction
Chapter 3	Problems and Objectives
Chapter 4	Economic Projections and Environmental Preferences
Chapter 5	Resource Base and Existing Programs
Chapter 6	Future Without Condition
Chapter 7	Needs
	Continued

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1/ The TSC is located at Broomall, Pennsylvania. The TSC provides training and specialists in the field of water resources planning.

2/ The WAC is composed of members representing the ERS, FS and SCS at the Washington office.

Report Outline--Continued

Chapter 8	Alternative Plans
Chapter 9	Preferred Plan
Chapter 10	Opportunities for USDA Programs in the Preferred Plan: Development and Impact
Chapter 11	Coordination and Programs for Future Development

Management of the Study

State

The North Carolina Department of Natural and Economic Resources (DNER) is the agency designated to represent North Carolina in water and land resource development activities. The DNER will be the responsible agency through which information will be requested, collected and dispersed for the North Carolina segment of the study area. This agency will work with USDA in coordinating planning activities with other interested federal, state and local agencies. The North Carolina State Soil and Water Conservation Commission will assist as needed with coordination, supplying data, obtaining public participation, attending meetings and will co-sponsor the study.

The Virginia State Water Control Board, Bureau of Water Control Management (SWCB) is the agency designated to represent Virginia in an overall capacity with relation to its water resources development. The SWCB will maintain this responsibility as the central agency through which information will be requested, collected and dispersed for the Virginia segment of the study area. The planning efforts of other interested state and federal agencies will be coordinated with the USDA through the SWCB. The Virginia Soil and Water Conservation Commission will assist as needed with coordination, supplying data, obtaining public participation, attending meetings and will co-sponsor the study.

Local

The soil and water conservation districts; members of regional, municipal, or local planning commissions; rural development committees; local environmental interest groups; individuals and leaders in community and rural affairs will be invited to provide assistance in the study.

## Field Advisory Committee

A Field Advisory Committee (FAC) has been established to facilitate participation by the Department of Agriculture (USDA) agencies in the study. Membership of this committee is as follows:

Soil Conservation Service, Chairman  
Economic Research Service, Member  
Forest Service, Member

Method of Operation. Close coordination will be maintained through the Chairman of the FAC throughout the study so there will be a complete exchange of information to avoid duplication of study effort as the study progresses. Details concerning methodology, criteria, scheduling of survey activities, and all other matters affecting joint participation, will be agreed upon early in the survey. Members will maintain appropriate liaison with the administratively responsible officers of their respective service.

The work of the SCS will be administered through its state office, Richmond, Virginia. The current SCS river basins staff in Virginia and various specialists from North Carolina and Virginia will be assigned to the study on a temporary basis. Technical assistance will be provided by the Northeast Technical Service Center, Broomall, Pennsylvania, and the Northeast Services Cartographic Unit at Hyattsville, Maryland.

The work of the ERS and FS will be administered from their respective offices with a representative assigned to work with the SCS planning staffs. The ERS staff will be headquartered at Broomall, Pennsylvania and the FS staff will be headquartered at Doraville, Georgia.

Meetings. The FAC will hold meetings at three-month intervals until this spacing needs to be reduced or extended. The committee will meet at 10:30 a.m. in the SCS office at 400 N. Eighth Street in Richmond, Virginia, unless specific arrangements are made otherwise. An agenda will be prepared for each meeting. Progress reports, changes in methodology, scheduling or other agreed to items will be included in the minutes. A secretary will be appointed to record the minutes and will circulate a draft copy to all members within ten days.

## Public Information Meetings

Public information meetings will be arranged, coordinated, and conducted in the States of North Carolina and Virginia, respectively, by the DNER and the SWCB cooperating with the Soil and Water Conservation Commissions. Public information meetings will be held as necessary, but at least three series of meetings will be held to secure and maintain public participation in the study. The first series of meetings will be held to explain the study and to obtain suggestions for study concerns that may be translated in specific study components. A second series of meetings will be held near the end of Phase 1 to assure the specific public concerns are included. Then a third series of meetings should be held near the end of Phase 2. The purpose will be to present inventory data as related to component needs and to present an appraisal of resource capability to meet

needs without project action. The planning staff will solicit suggestions for the general types of alternative solutions to be considered. Another series of meetings will be held to present alternative solutions and to solicit ideas for the preferred final plan.

#### Work Group Meetings

Technical study coordination can be maintained with state sponsors through functional work groups. Possible participants include the Corps of Engineers, U. S. Fish and Wildlife Service, Environmental Protection Agency; state agencies such as the Extension Service, Tourist Commissions, Parks and Recreation Commissions, Fish and Wildlife agencies, Departments of Health, Water Control Board, State Planning Offices, Experiment Stations and Forestry Departments.

Work group meetings with federal and state agencies will be scheduled as needed. Work group meetings will be requested and coordinated by the SCS through the appropriate agencies involved. Work groups are contemplated for the following areas of concern: land use, pollution abatement, nonpoint source pollution, fish and wildlife, recreation, economics and erosion and sediment.

#### Staffing

Headquarters for operation of the overall study will be in Richmond, Virginia. Representatives of the Economic Research Service (ERS) and the Forest Service (FS) will be located in Broomall, Pennsylvania and Doraville, Georgia, respectively.

The Virginia SCS River Basins Staff Leader will have responsibility for coordination of USDA study efforts. General guidance will be provided by the FAC.

The Virginia SCS staff is composed of one river basins staff leader, one hydrologist and one clerk-stenographer. Adequate technical personnel from North Carolina and Virginia will be assigned to collect data to accomplish the objectives of the study. Various technical specialists such as an agronomist, biologist, engineer, economist, geologist, hydrologist, district conservationist, area conservationist, soil scientist and other support personnel provide input as needed.

The ERS staff will be composed of one full-time agricultural economist. Support personnel will be assigned as needed. The FS staff will be composed of one planner, one economist and one hydrologist. Support staff will be assigned as needed.

### Schedule Summary

Completion of major planning activities are scheduled as follows:

Determine Objectives and Prepare Plan of Work	April 1977
Inventory and Analysis of Resource Bases, Identification of Needs and Interim Report	January 1979
Development and Evaluation of Alternative Plans	October 1979
Plan Selection and Implementation	March 1980
Draft Report	June 1980
Final Report	September 1980

### Funding

Accumulated expenditures and estimates for Fiscal Years 1977, 1978 and 1979 are shown as follows:

USDA Agency	Cost Summary by Fiscal Year				
	Accumulated Expenditure 1976 1/	Estimated Cost by Fiscal Year			
		1977	1978	1979	1980
ERS	25	50	52	52	25
FS 3/	71.2	32.3	32.4	35.1	17.5
SCS, VA	49.8	91	70	60	50
SCS, NC	11.8	25	25	25	20

1/ Actual expenditures through September 1976.

2/ The base year for cost estimates is 1976.

3/ Includes Washington Office assessment.

### Sponsors and Co-Sponsors

Sponsors, co-sponsors and other participating agencies will make no direct monetary contribution to the USDA in carrying out USDA activities in the survey. They will, however, provide personnel, material, and information that are available for use in the study.

Approval Sheet

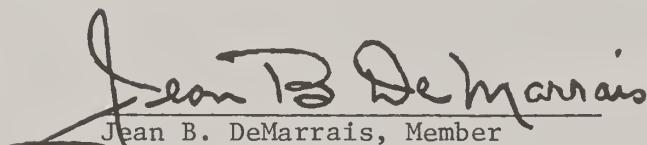
Members of the USDA Field Advisory Committee agree to the general terms and conditions set forth in this Plan of Work for the Chowan - Pasquotank River Basins Study.

ERS

  
John E. Hostetler, Member  
Economic Research Service  
U. S. Department of Agriculture  
1974 Sproul Road  
Broomall, Pennsylvania 19008

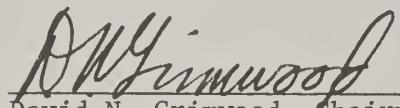
March 17, 1977  
Date

FS

  
Jean B. DeMarrais, Member  
U. S. Forest Service  
North Gate Office Park, Rm. 2116  
3620 Interstate 85, N.E.  
Doraville, Georgia 30340

March 17, 1977  
Date

SCS

  
David N. Grimwood, Chairman  
Soil Conservation Service  
400 North 8th Street  
Richmond, Virginia 23240

March 17, 1977  
Date



FIGURE 1

U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

# CHOWAN-PASQUOTANK RIVER BASIN

Scale 1:750 000





FIGURE 2

U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

POLICY COMMITTEE AREAS  
NORTH CAROLINA — VIRGINIA  
CHOWAN-PASQUITANK RIVER BASIN

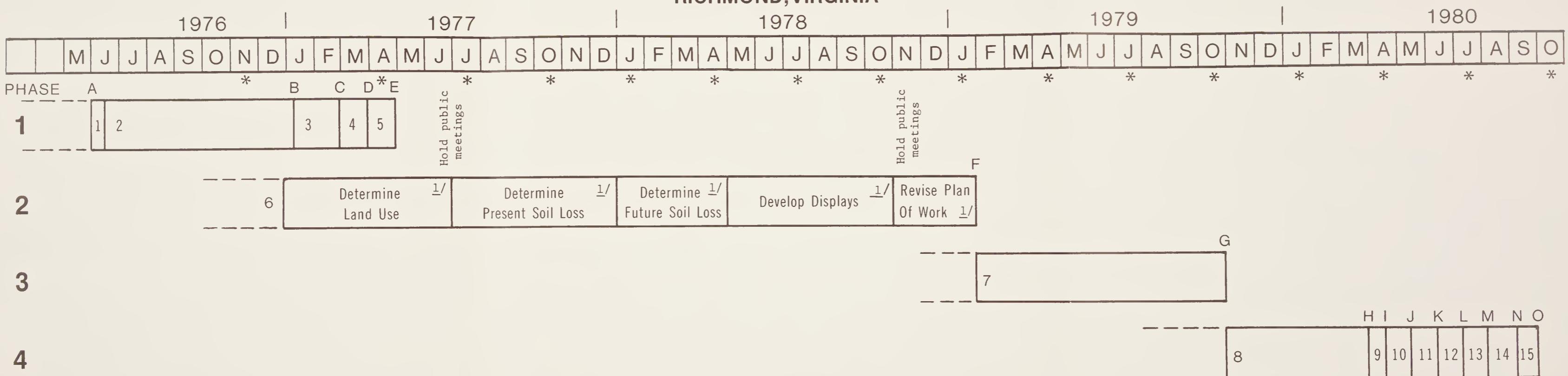
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CHART 1. SCHEDULE FOR MAJOR ACTIVITIES—CHOWAN-PASQUOTANK RIVER BASINS, NORTH CAROLINA & VIRGINIA  
RICHMOND, VIRGINIA



Milestone	Item No.	Description	Milestone	Item No.	Description
A	1.	Start.	H	8.	Evaluate data-assemble displays and develop preferred plan.
B	2.	Prepare draft plan of work.	I	9.	Prepare preliminary draft report.
C	3.	Review and approval.	J	10.	Agency review.
D	4.	Prepare final plan of work.	K	11.	Prepare draft report.
E	5.	Finish and distribute plan of work.	L	12.	Review and approval.
F	6.	Collect data-develop economic data, determine problems and needs, summarize data.	M	13.	Prepare final report.
G	7.	Analyse data-develop alternatives, select elements of preferred plan.	N	14.	Finish report.
			O	15.	Distribute report.

\* Regular months for FAC meetings

<sup>1/</sup> Critical work items in Phase 2



Table 2. Phase 1. Organization and Setting of Objectives Work Outline  
Chowan - Pasquotank River Basins

Continued

Table 2. Phase 1. Organization and Setting of Objectives Work Outline  
 Chowan - Pasquotank River Basins--Continued

Table 3. Phase 1. Public Involvement Work Outline  
Chowan - Pasquotank River Basins

Table 3. Phase 1. Public Involvement Work Outline  
Chowan - Pasquotank River Basins--Continued

Major Activities	Response(s) to Agency(s)	Item No.	Work Items		ERS :		FS :		SCS :		NC :VA		Man-days	Duration	Due Date						
			Ag. Econ.	Planner	Econ.	Inf. S.P.	P. Ldr.	Typlst	D. Cons.	SCB	Ag. Econ.	Inf. S.P.									
4. Develop News Articles	SCS	14.	Prepare and provide study status information to Field Offices.					10	1	10			9	5	4/77						
5. Develop Questionnaire	SCS, FS, ERS, SCS	15.	Draft news releases by county and/or field office area.					1	1	1			21	10							
6. Train Key SCS and State Agency Personnel in Public Involvement Procedure	SCS, ERS, FS, VA NC	16.	Prepare draft questionnaire to obtain public response as to problems and needs.					1	1	1			4	1							
7. Hold Public Meetings	SCS, FS, ERS, NC, VA	17.	Review and respond to comments.					1	1	1			4	1							
		18.	Develop agenda and arrange for three meetings.					2	2	2			18	3							
		19.	Assemble equipment and displays needed.					5	5	5			2	1							
		20.	Conduct three training sessions. Determine need and number of public meetings to be held by subarea. See Figure 2. Consult with VA-NC Advisory Committee already in effect.					5	5	5			42	5							
		21.	Determine adverse situations.					2	1	5			8	2							
		22.	Determine methods of resolving conflicts and resolve known conflicts prior to public meetings.					10	1	10			21	10							
		23.	Determine agenda, displays and location for meetings by subareas, determine equipment needed. Schedule five meetings. Determine cartographic cost.					10	10	5	5	5	53	10							
		24.	Provide public notices via news articles, releases through appropriate media.					3	3	8	8	11	5								
		25.	Attend public meetings. Each agency make short presentation. Elect policy committees, document list of participants. Request participation.					5	5	3	10	2	33	5							
		26.	Analyse public response. Public response must be in writing and properly documented.					3	3	3	1	2	12	3							
													Continued								
													Subtotals	27	27						
														10	49	16	10	61	18	13	238

Table 3. Phase 1. Public Involvement Work Outline  
Chowan - Pasquotank River Basins--Continued

Table 4. Phase 2. Inventories, Analyses and Identification of Problems and Needs  
Chowan - Pasquotank River Basins

Table 4. Phase 2. Inventories, Analyses and Identification of Problems and Needs  
Chowan - Pasquotank River Basins--Continued

Table 5. Phase 2. Public Involvement Work Outline  
Chowan - Pasquotank River Basins

Table 6. Phase 2. Land Use, Treatment & Management Work Outline  
Chowan - Pasquotank River Basins

Man-days Required by Position and Agency														
Major Activities	Responsibility	Agency(s)	Item #	Work Items							Due Date			
				ERS	FS	SCS	SCS	Total Man-days	Duration					
1. Establish Soils Productivity Groups	SCS, ERS		1.	Inventory soil survey data. Prepare soils interpretations for selected uses and establish soils productivity groups (SPG) in VA consistant with NC groupings.	30	3	30	2	1	20	86	30 2/77		
2. Inventory Land Resources	SCS, ERS FS		2.	Determine land uses, delineate land and water areas and identify ownership patterns. Prepare tables.	8	42	18	20	10	20	2	1	80	201 42 6/77
3. Inventory Land Treatment Data by SPG	SCS, ERS FS		3.	Determine type and quantity applied to date and cost of untreated areas. Effect of land treatment applied to date on erosion and sediment production.	15	8		27	10	5	10	110	20 205 30 4/77	
4. Inventory Organizations, Programs and Institutions	SCS, FS		4.	Inventory organizations, programs and institutions affecting water and land resources and compile a list.				1	2	2	5	10	10 4/77	
5. Identify Forest Types	FS		5.	Identify forest types using available data and field inspections.				7			7	7	6/77	
6. Identify Trends in Land Use Changes	ERS, FS		6.	Identify trends in land use changes between natural areas, urban agricultural and commercial forestry uses.	41	18		3			90	28	7/77	
7. Identify Prime and Unique Farmland	SCS, ERS		7.	Use available soils data, consult with district conservationist and local organizations.	9			10	5	70	70	164	30 10/77	
8. Displays	SCS, ERS FS		8.	Develop maps, tables and charts to display data collected in Items 1 through 7. Estimate cartographic services costs. Maps may include: generalized soil map, land resource map, land use map and geology.	2	3	3	5	3	5	5	21	5 11/77	
Totals											56 139 50 50 10 58 3 31 17 100 270 20 784 11/77			

Table 7. Phase 2. Floodwater Damage Work Outline  
Chowan - Pasquotank River Basins

Table 8. Phase 2. Drainage Work Outline  
Chowan - Pasquotank River Basins

Table 9. Phase 2. Irrigation Work Outline  
Chowan - Pasquotank River Basins

Man-days Required by Position and Agency											
Major Activities	Item No.	Agency(s)	Work Items			Total Man-days	Duration	Due Date			
			ERS	SCS	:NC :VA						
1. Determine Existing Water Supply	SCS, NC, VA	SCS, ERS	1. Inventory existing water supply and quality.			20	5	10	2	12	20
2. Inventory Potential reservoir sites for water storage			2. Prepare listing of sites with potential storage in acre feet.			20	5	10	2	12	20
3. Prepare Displays and Determine Cartographic Cost	SCS		3, Prepare appropriate displays for Items 1 and 2. Estimate cartographic cost.			3	1	1	3	5	10/77
			4. Cartographic, prepare final maps and print.			3	1	1		2	11/77
						20	3	12	23	4	12/20/94
						Totals					11/77

Table 10. Phase 2. Water Supply Use and Management Work Outline  
Chowan - Pasquotank River Basins

Table 11. Phase 2. Environmental Quality Work Outline  
Chowan - Pasquotank River Basins

Table 12. Phase 2. Cultural Work Outline  
Chowan - Pasquotank River Basins

Major Activities	Responseable Agency(s)	Item No.	Work Items	FS		SCS		: NC:VA		Man-days Total	Man-days Duration	Due Date	
				Planner	P. Ldr.	Type List	GeoL.	DNR	SCGB				
1. Describe Cultural Environmental Components	SCS, FS NC, VA	1.	Describe environmental components of: <ul style="list-style-type: none"> <li>a. historical sites</li> <li>b. archaeological sites</li> <li>c. unique sites</li> </ul> (1) agricultural (2) forest	4	1	1	12	8	8	34	12	10/77	
2. Prepare Displays	SCS, FS NC, VA		Prepare appropriate displays such as maps, tables or charts.	1	1	1	3	2	2	10	3	11/77	

Table 13. Phase 2. Economic Conditions Work Outline  
Chowan - Pasquotank River Basins

Man-days Required by Position and Agency																							
Major Activities	Agency(s)	Title No.	Work Items	ERS	FS	SCS	NC : VA	Total Man-days	Duration	Due Date													
				Ag. Econ.	Sta. Econ.	Prog.	Planner	Geol.	P. Ldr.	Econ.	SWCB	DNBR	Econ.	P. Ldr.	Typist	Planner	Prog.	Ec. Ass't.	Sta.	Ag. Econ.			
1. Inventory Human Resources	ERS	1.	Inventory human resources: 1/ a. population sectors (urban & rural) b. determine age, education and racial distribution.	3	5				1	10	178	64	4/78							8	5	4/77	
2. Determine Agricultural Production and Trends	ERS, SCS	2.	Determine agricultural production and trends. 1/ a. current land use resource inventories by SPG (crop) and pasture, forest and other, b. commodities-describe changing structure of agriculture, including number, tenure, size of farm firm, capital investments and farm sales.	52	20	64	30		1	1	10	178	64	4/78									
3. Display Agricultural Adjustment and Social Well Being	ERS	3.	Display agricultural adjustment and social well being. County census data will be aggregated by subregions. 1/	2	3				15			12	7	4/78							5	3	4/77
4. Determine Forestry Production and Trends	FS	4.	Provide forestry production and trends by acreage, percent commercial, volume of sales, volume of growth. Inventory forest products industries. 1/						15			15	15	10/77									
5. Determine Mineral Production and Trends	FS, SCS NC, VA	5.	Indicate value of minerals produced, type and location of mineral operations, location of mineral deposits and potential productions. 1/	4	9	10	1	1	10	18	20	73	20	4/77									
6. Determine Other Trends in Economic Development	ERS	6.	Determine other trends in economic development. Develop data in standard industrial classes. Shift-share analysis will clarify employment trends. Display the following manufacturing data: 1/ a. specialization and volume of major classes, b. major water using industries, c. potential and expected growth of major industries.		4	20						24	4	4/77									

1/ Base year will be 1976. Projections from the LP will be for 1990, 2000 and 2020. Data will be displayed by specified subareas.

Table 14. Phase 2. Recreation Work Outline  
Chowan - Pasquotank River Basins

Table 15. Phase 2. Fish and Wildlife Work Outline  
Chowan - Pasquotank River Basins

Table 16. Phase 2. Erosion and Sediment Work Outline  
Chowan - Pasquotank River Basins

Table 17. Phase 2. Land Disposal of Solid Waste Work Outline  
Chowan - Pasquotank River Basins

Table 18. Phase 2. Nonpoint Source Pollution Work Outline  
Chowan - Pasquotank River Basins

Table 19. Phase 2. Low Flow Management Work Outline 1/  
Chowan – Pasquotank River Basins

Major Activities	Agency(s)	Responsibility	Work Items	Man-days Required by Position and Agency			
				SCS	INC:VA	SWCB	DNER
				Mar-days	Total	Due Date	Duration
1. Determine if Water Uses are Restricted During Low Flow Periods	SCS, NC, VA	ITCB	1. Determine low flow problem and identify needs in ac. ft. at strategic points for the following: fish and wildlife, navigation, recreation, water supply, health conditions, aesthetics and water quality.	10	10	15	10
			2. Collect data obtained in Tables 10, 11, 14 and 15 and analyse.	5	5	10	30
2. Determine Minimal Discharge Requirements to Prevent Salt Water Intrusion	NC, VA		3. Determine low flow needs to prevent salt water intrusion.	15	10	25	10
1/ Work will be limited to a literature search of existing data.							
Totals							
				15	15	40	100
							10/77

Table 20. Phase 3. Development and Evaluation of Alternative Plans Work Outline  
Chowan – Pasquotank River Basins

Major Activities	Item	Agency(s) Responsible	Work Items	Man-days Required by Position and Agency		
				Total Man-days	Duration	Due Date
1. Management	ERS, FS SCS	"	1. Determine general USDA management procedures with sponsoring agencies. 2. Develop tentative schedules with target dates. 3. Prepare agenda and schedule FAC meetings. 4. Prepare progress reports for USDA FAC meetings and attend quarterly as needed. 5. Maintain liaison with other Federal and state agencies.			
2. Identify and Formulate Plans	SCS, ERS FS, NC, VA		6. Formulate technically feasible alternative plans using complementary plan elements as building blocks. Prepare one plan emphasizing NED, one plan emphasizing EQ and one or more plans representing a mix of the two.			
3. Evaluate Benefits and Costs of Possible Plan Elements	"		7. Considering present and future needs, evaluate plan elements. Determine monetary benefits and cost or positive and negative effects where monetary values cannot be assigned. Show future conditions without a plan to be implemented.			
4. Prepare Alternative Plans	"		8. Prepare alternative plans for presentation to the public and others.			
5. Test Alternative Plans	"		9. Test each alternative plan for acceptability, effectiveness, efficiency and completeness.			
6. Public Involvement	"		10. Develop public involvement plan • Develop schedules, news releases, agenda and hold meetings. See Table 21.			
7. Prepare Displays and Accounts	"		11. Prepare displays and accounting systems for each alternative as described in the multi-objective guidelines.			
8. Determine Public and Private Interests	"		12. Identify, clarify and resolve conflicts within and between alternatives. 13. Select elements for the preferred plan based upon public interest and priorities.			
				Totals		10/79

Table 21. Phase 3. Public Involvement Work Outline  
Chowan - Pasquotank River Basins

Table 22. Phase 4. Plan Selection and Implementation Work Outline  
Chowan - Pasquotank River Basins

### Man-days Required by Position and Agency

Major Activities	Agency(s) Responsible	Work Items		
			Total Man-days	Due Date Duration
1. Prepare Outline of Preferred Plan	SCS,ERS FS,VA,NC	1. Prepare preferred plan including all elements selected in Phase 3.		
2. Prepare Displays	"	2. Prepare displays for preferred plan and accounting systems as described in multi-objective guidelines.		
3. Involve Public	"	3. See Table 23.		
4. Determine Public and Private Interest	"	4. Analyse questionnaire and public response.		
5. Identify, clarify and resolve conflicts	"	5. Identify and resolve conflicts.		
6. Select Elements for Final Plan	"	6. Select elements for final plan based on public preferences and include in draft report.	3/80	
7. Prepare Draft Report	"	7. Prepare draft report, send out for review and concurrence to concerned parties.	6/80	
8. Schedule Plan Implementation	"	8. Prepare displays of plan elements, costs, recommended sequence for implementation, existing authorities and needed authorities for implementation.	3/80	
9. Prepare Final Report	"	9. Respond to comments and prepare final report.		
		10. Prepare dummy draft.		
		11. Cartographic prepare finished report.		
		12. Distribute final report.	9/80	
				Totals 9/80

Table 23. Phase 4. Public Involvement Work Outline  
Chowan - Pasquotank River Basins

Major Activities	Responsible(s)	Agency(s)	Man-days Required by Position and Agency									
			ERS	FS	SCS	INC : VA						
Work Items												
1. Hold Policy Committee Meetings to Present Plan and Arrange for Implementation and Public Meetings	SCS, ERS FS, NC, VA	SCS, ERS FS, NC, VA	2.	2	2	2	2	2	2	2	2	2
	"	"	1.	1	1	1	1	1	1	1	1	1
	"	"	2.	2	2	2	2	2	2	2	2	2
	"	"	3.	2	2	2	2	2	2	2	2	2
	"	"	4.	2	2	2	2	2	2	2	2	2
2. Hold Public Meetings to Present Plans and Arrange for Implementation	"	"	5.	2	2	2	2	2	2	2	2	2
	"	"	6.	1	1	1	1	1	1	1	1	1
	"	"	7.	2	2	2	2	2	2	2	2	2
	"	"	8.	5	5	5	5	5	5	5	5	5
Total												
20												
20												
60												
20												
20												
180												
9/80												



